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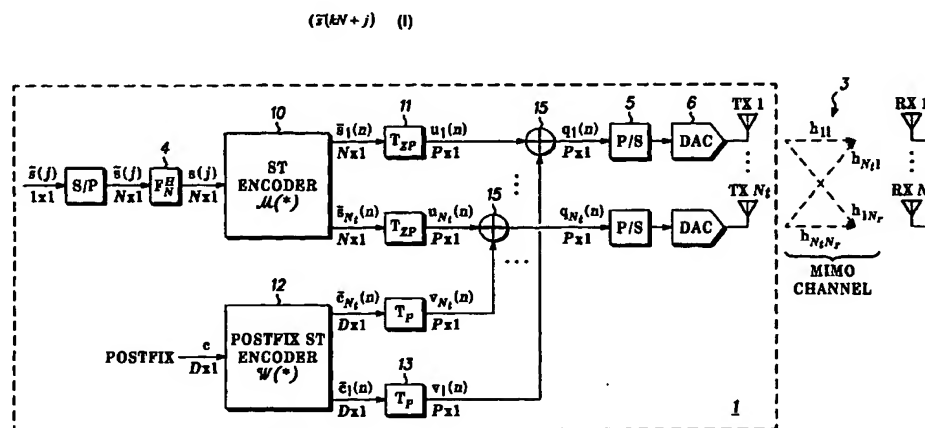
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03292120.7 28 August 2003 (28.08.2003) EP</p> <p>(71) Applicant (for all designated States except US): MOTOROLA INC [US/US]; 1303 E.Algonquin Road, Schaumburg, IL 60196 (US).</p> <p>(72) Inventors; and</p> <p>(75) Inventors/Applicants (for US only): RIBEIRO DIAS, Alexandre [FR/FR]; 37 Avenue Reille, F-75014 Paris (FR). DE COURVILLE, Marc [FR/FR]; 43 Rue du</p> | <p>moulin vert, F-75014 Paris (FR). MUCK, Markus [FR/FR]; 67-69 Rue de la colonie, F-75013 Paris (FR).</p> <p>(74) Agent: MCCORMACK, Derek, J.; Motorola European Intellectual Property Operations, Midpoint, Alencon Link, Basingstoke Hampshire RG21 7PL (GB).</p> <p>(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.</p> <p>(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,</p> |
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- (54) Title: OFDM CHANNEL ESTIMATION AND TRACKING FOR MULTIPLE TRANSMIT ANTENNA**



- (S7) Abstract:** Multiple Transmit Multiple Receive Orthogonal Frequency Division Multiplexing ('OFDM') comprising generating bit streams and corresponding sets of N frequency domain carrier amplitudes (see (I)), $0 \leq j \leq N-1$ modulated as OFDM symbols subsequently to be transmitted from a transmitter, where k is the OFDM symbol number and j indicates the corresponding OFDM carrier number. Affix information is inserted at the transmitter into guard intervals between consecutive time domain OFDM symbols and are used at the receiver to estimate the Channel Impulse Response (H_{bn}) of the transmission channels, the estimated Channel Impulse Response (see (II)) being used to demodulate the bit streams in the signals received at the receiver. The affix information is known to the receiver as well as to the transmitter, and is mathematically equivalent to a vector (c_b) that is common to the time domain OFDM symbols multiplied by at least first weighting factors (a_k) that are different for one time domain OFDM symbol (a_k) than for another and second weighting factors ($w_i(k)$) that enable one of the transmit antenna means (i) to be distinguished from another.



SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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